

## SWITCHING REGULATOR WITH TRANSIENT RECOVERY CIRCUIT

### Abstract of the Disclosure

A transient recovery circuit in a switching regulator responds to relatively quick changes in load currents to suppress output voltage overshoots or undershoots. The transient recovery circuit operates independently of a regular feedback circuit. The transient recovery circuit can be used in a single phase or a multiphase switching regulator. In one embodiment, the transient recovery circuit overrides a control voltage from the regular feedback circuit to control the duty cycle of a pulse-width modulation circuit in the switching regulator during transient conditions. In another embodiment, the transient recovery circuit controls a dedicated transient phase in a multiphase switching regulator. The transient recovery circuit is inactive during non-transient conditions.

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